

WHAT IS CLAIMED IS:

1. A high frequency switching component for being connected to a transmission circuit, a reception circuit, and an antenna to be used for switching either to a state in which the transmission circuit is connected to the antenna, or a state in which the reception circuit is connected to the antenna, comprising:

a multilayer circuit board, on which there is formed a circuit including:
a transmission circuit terminal to be connected to the transmission circuit;
a reception circuit terminal to be connected to the reception circuit;
an antenna terminal to be connected to the antenna;

a ground terminal;
a first diode whose anode is connected to the transmission circuit terminal and the cathode thereof is connected to the antenna terminal;

a second diode whose anode is connected to the transmission circuit terminal and the cathode thereof is connected to the ground terminal;

a signal line for connecting the transmission circuit terminal, the reception circuit terminal, and the antenna terminal via the first diode; and

an inductor disposed between the signal line and the ground terminal to reduce noise on the signal line;

in which the transmission circuit terminal, the reception circuit terminal, the antenna terminal, the ground terminal, the first diode, and the second diode are disposed on a surface of the multilayer circuit board; and

at least a part of the signal line is disposed inside the multilayer circuit board.

2. The high frequency switching component according to Claim 1, wherein the inductor is provided by a line electrode disposed inside the multilayer circuit board.

3. The high frequency switching component according to Claim 2, wherein the inductor is disposed between the ground terminal and a part of the signal line at which the signal line is connected to the antenna terminal.

5 4. The high frequency switching component according to Claim 1, wherein the inductor is disposed between the ground terminal and a part of the signal line at which the signal line is connected to the antenna terminal.

10 5. A high frequency switching component for being connected to a transmission circuit, a reception circuit, and an antenna to be used for switching to either a state in which the transmission circuit is connected to the antenna, or a state in which the reception circuit is connected to the antenna, comprising:

 a multilayer circuit board, on which there is formed a circuit including:

 a transmission circuit terminal to be connected to the transmission circuit;

15 a reception circuit terminal to be connected to the reception circuit;

 an antenna terminal to be connected to the antenna;

 a ground terminal;

 a first diode whose anode is connected to the transmission circuit terminal and the cathode thereof is connected to the antenna terminal;

20 a second diode whose anode is connected to the reception circuit terminal and the cathode thereof is connected to the ground terminal;

 a signal line for connecting the transmission circuit terminal, the reception circuit terminal, and the antenna terminal via the first diode; and

 an LC filter connected to the signal line to reduce noise on the signal line;

25 in which the transmission circuit terminal, the reception circuit terminal, the antenna terminal, the ground terminal, the first diode, and the second diode are disposed on a surface of the multilayer circuit board; and

at least a part of the signal line being disposed inside the multilayer circuit board.

6. The high frequency switching component according to Claim 5, wherein
5 the LC filter is disposed inside the multilayer circuit board.

7. The high frequency switching component according to Claim 6, wherein
the LC filter is connected to a part of the signal line at which the signal line is
connected to the antenna terminal.

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8. The high frequency switching component according to Claim 5, wherein
the LC filter is connected to a part of the signal line at which the signal line is
connected to the antenna terminal.